IN THE SPECIFICATION

Please amend Para. 0035 of the Specification, as follows:

[0035] Fig. 4 shows, in block diagram form, an exemplary quality control test system according to the present invention for screening each disc 22a-d, prior to assembly into the disc drive 20, to make certain that fly height stability is acceptable given the specifications of the disc drive in which the disc is to be used at the selected value for the outer diameter 42 of the data track band. To advantage, the testing according to the present invention can be performed by the quality control system on a substrate prior to sputtering to make a magnetic disc. <u>For example, the substrate may be an aluminum substrate.</u> In this manner, the suitability of a disc is determined at an early stage of a manufacturing process, and the sputtering process to make magnetic discs is performed using substrates that are already shown acceptable in respect of fly height stability.

Please amend Para. 0036 of the Specification, as follows:

[0036] Given the need to accurately detect from disc to disc the point at which such roll-off occurs that the fly height of the slider becomes unstable, as well as the desire to do so in a non-destructive manner, as compared to the destructive testing which is done in the glide avalanche approach, the present invention has been developed. As a first step, a slope scan type of instrument, such as a profilometer 100, shown schematically in Fig. 5A, will be utilized. This comprises at least a laser or equivalent source 102 and detector 104. The output of the laser 102 can be directed to each track<u>, e.g., track 120</u>, with the reflection off the track <u>120</u> being directed to a detector 104 so that the slope angle θ of each track <u>120</u> of the outer region of the disc <u>22a</u> can be accurately detected. While using this or a similar device, the disc <u>22a</u> is rotated past the profilometer 100 as shown in Fig. 5B so that a very large number of points on a given track 120 can be examined and the slope of the points along the line detected and recorded. This step is repeated for a set of M circumferential tracks shown, for example, as 120, 122 in Fig. 5B, with the data being stored so that a sequence of points representing the slopes of a set of tracks along N radial lines indicated at 130, 132, 134 can be stored. This step is

indicated at step 600 in Fig. 6. It should be noted that by rotating the disc and utilizing high speed sampling, it is possible to sample and store data for 30,000 or more radial lines.

Please amend Para. 0037 of the Specification, as follows:

[0037] As a next step 602, as indicated in Fig. 6, a circumferential averaging step is carried out. This circumferential averaging step 602 averages the measured slope at the same circumferential track for each track. This step 602 of taking a track average of an entire revolution for a track is used to obtain a representative slope of each track, tightening the variations due to local differences in a disc and providing a good representation of one revolution around a disc for a given track. <u>Thus, an average slope is calculated from a plurality of points along a track around the circumference of the disc.</u> The track is assumed to represent a constant distance from the center of the disc.

Please amend Para. 0038 of the Specification, as follows:

[0038] As the next step 604, a moving average of the slope (developed at step 602) of a plurality of adjacent tracks is generated, before any derivative is taken. The use of the moving average, the sequence of data points for the processor where each point is the moving average for L tracks, where each track is represented by the circumferential average slope for the entire track as developed at step 602. <u>The moving average is taken along a radial length of the disc sufficient to encompass a plurality of tracks.</u> The radial length [[of]] <u>across</u> the number of tracks L in each moving average developed by the processor is chosen to eliminate spikes from appearing in the differentiation which is to follow, while still maintaining a lateral resolution moving radially across the surface of the disc, which is much smaller than the width of a head. <u>Preferably, the radial length across the tracks is also less than the width of a slider to be used in a disc drive having the operating characteristics represented by a curvature profile to which the curvature profile of the tested disc is matched.</u> This step 604 provides a measurement of the surface profile of the disc which is much more accurate than approaches taken in the prior art.

Please amend Para. 0040 of the Specification, as follows:

[0040] The result of the method described with respect to Fig. 6 is to provide a very accurate curvature profile moving radially outward across the disc. By using this curvature profile, the disc manufacturer can test discs at the substrate level. The test described determines whether each disc will lend itself to flying a slider at a desired height as established by the disc drive specifications over the surface of the disc without colliding with the disc and while maintaining an ~~idea~~ <u>ideal</u> separation gap from the surface of the disc to optimize recording density and accuracy. This curvature profile is in contrast to the glide avalanche testing method, which essentially comprises flying a slider over the surface of the finished disc periodically moving outwardly along a radius, until the slider collides with the surface of the disc. This glide avalanche method, can only be conducted on a finished disc, and is essentially a destructive testing method, i.e., since there has been a collision between the slider and the surface of the disc, moot discs which have been tested according to the glide avalanche method are considered not usable because of lost surface storage area.